Exemption No. 7983

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
KANSAS CITY, MISSOURI 64106

In the matter of the petition of	*	
RAYTHEON AIRCRAFT SERVICES (RAS)	*	
for exemption from § 23.807(d)(1)(ii) of Title 14 of the Code of Federal Regulations	*	Regulatory Docket No. FAA-2002-13885-1

GRANT OF EXEMPTION

By letter dated September 10, 2002, Mr. David McCorkle, Program Manager, Raytheon Aircraft Services (RAS), P.O. Box 9162, Wichita, Kansas 67277, petitioned for an exemption from § 23.807(d)(1)(ii) of Title 14 of the Code of Federal Regulations (CFR). The exemption would permit type certification of a cargo version of the Model 1900D without the minimum number of emergency exits, as required by § 23.807 "Emergency exits", effective at Amendment level 23-49. RAS will show that the exemption will not adversely affect safety, and that the public will benefit from a grant of exemption.

The petitioner requires relief from the following regulation(s):

Section 23.807(d)(1)(ii) requires an airplane with a total passenger seating capacity of 16 through 19 to be equipped with three emergency exits. One emergency exit must be on the same side as the main passenger entry door, and the other two exits must be on the side opposite the main entry door. The Model 1900D was type certificated with a passenger count of 19.

The petitioner supports its request with the following information:

RAS supplied all relevant information required by 14 CFR part 11, § 11.81 "What information must I include in my petition for an exemption?" The following is a summary of their petition for exemption.

STATEMENT OF ISSUE

RAS, located in Wichita, Kansas, has submitted a Supplemental Type Certificate (STC) application for an interior conversion from passenger seating floor plans to one dedicated for use in carrying cargo. The new STC interior change does not remove the Model 1900D airplane from the commuter category, per Type Certificate A24CE. The STC does not change the seating capacity of the airplane from the original TC airplane, which provides a total passenger seating capacity of 19 and a crew seating capacity of two. However, the new floor plans allow seating for only three occupants; the pilot, copilot, and an observer.

The new floor plan has no need to evacuate a large quantity of persons, since the main purpose of the floor plan is to maximize available floor space. The new floor plan is designed to block some of the emergency exits. On the righthand side the aft exit is blocked and on the lefthand side the single emergency exit is blocked. There is still access to the main entry door and the righthand forward escape hatch. The righthand escape hatch satisfies the requirements of 23.807(b), focusing on the type and operation of emergency exits.

An exemption for relief from the requirements of 23.807(d)(1)(ii) is requested.

APPLICANT POSITION

RAS wishes to market the Model 1900D airplane for use in carrying cargo. RAS has identified a sizable market for cargo airplanes. The 1900D airplane, currently certified for single pilot operation with a relatively large cabin, is a prime candidate for moving cargo. The proposed aircraft floor plan layout maximizes the cargo capacity of the interior while maintaining emergency exit access.

The Model 1900D, type certificated for 21 occupants (19 passengers, two crew) has one main entry door and three emergency exits. One emergency exit is on the same side of the fuselage as the main entry door. The remaining two emergency exits are on the side of the fuselage opposite the main entry door. A simple comparison shows that egress for three occupants with two available exits, one per side of the airplane, gives a level of safety equal to or greater than the type certificated airplane.

When the cargo configuration proposed by the STC is removed from the airplane, access to the escape exits is easily restored with the removal of the sidewall cargo liner and installation of a standard passenger interior sidewall. Thus, only those airplanes modified by the STC will exercise the privilege of the exemption, and only when the cargo conversion proposed by the STC is installed in the airplane.

PUBLIC INTEREST

Entrance of the Raytheon Model 1900D into cargo service will provide transportation companies new choices and increase competition in this market. The competition will serve to keep the cost of transporting goods by air low. The public will benefit by the lower wholesale prices of goods and services transported by air cargo services.

SUMMARY

An exemption for the Model 1900D is sought for relief against 14 CFR part 23.807(d)(1)(ii), which requires commuter category aircraft, with a passenger seating capacity of 16 or greater, to be equipped with an emergency exit on the same side of the aircraft as the entry door, and two exits on the opposite side of the aircraft. An STC is being sought to install a cargo configuration floor plan. The floor plan design would allow access to the forward entry door, but block access to the escape hatch on that side. The floor plan leaves one accessible emergency exit on the side of the cabin opposite the main entry door. The remaining emergency exits are blocked in order to maximize the available cargo space inside the cabin.

The new floor plan allows seating for three occupants: the pilot, copilot, and an observer. The Model 1900D airplane is type certificated for a passenger seating capacity of 19 and a crew seating capacity of two. The 1900D is equipped with four exits (a main entry door and three emergency exits), two on each side of the airplane. A simple comparison shows that egress for three occupants through two exits, one per side, gives a level of safety equal to or greater than the original certification basis.

Comments on published petition summary:

A summary of this petition was published in the FEDERAL REGISTER for public comment on January 22, 2003 (68 FR 3090). The comment period closed February 11, 2003. No comments were received.

The Federal Aviation Administration's (FAA) analysis is as follows:

To obtain this exemption, the petitioner must show, as required by §§ 11.81(d) and (e) respectively, that granting the request is in the public interest and will not adversely affect safety.

The FAA formally introduced airworthiness requirements for airplanes with a maximum seating capacity, excluding pilot seats, of 19 or less, and a maximum certificated gross weight of 19,000 pounds or less, in Notice of Proposed Rulemaking 83-17. FAA Final Rule 23-34 established the requirements, at which time § 23.807(d)(1)(ii) was introduced.

Section 23.807(d)(1)(ii) mandates that airplanes with a total passenger seating capacity of 16 through 19 require three emergency exits. One emergency exit must be on the same side of the fuselage as the passenger entry door, and two emergency exits must be on the side of the fuselage opposite the passenger entry door. This rule is the minimum level of safety in regards to emergency exits for those commuter category airplanes conducting commercial operations under either part 121 or part 135. The FAA believes the required number of emergency exits assures adequate egress in an emergency situation.

It is evident, then, that this particular rule is applicable during the conduct of normal passenger operations (i.e., commercial passenger service operating under part 121 or part 135). The rule did not envision the conversion of these airplanes from all-passenger operations to all-cargo operations.

Section 23.807(a)(1) establishes a requirement that **ALL** airplanes with a seating capacity of two or more, must have at least one emergency exit on the opposite side of the cabin from the main door. This rule is a minimum level of safety for any airplane, and is valid for all modes of operation. The cargo conversion Model 1900D proposed by RAS satisfies this rule.

In addition, the FAA Small Airplane Directorate has established policy on emergency exit requirements for cargo conversion airplanes. Memorandum "Guidance on Emergency Egress for Part 23 Cargo Airplanes", dated March 1, 2001, offers policy on emergency exit requirements for cargo conversion airplanes. This memorandum indicates specifically that:

- Multiseat airplanes must have a second exit on the opposite side from the main door per § 23.807(a)(1). Both exits must be accessible and must not be blocked with cargo.

- It is not acceptable to eliminate emergency exits by modifying an existing exit so it no longer complies with 14 CFR part 23 airworthiness requirements. However, under certain circumstances, such as in an airplane with more than two exits, it may be permissible to block exits with cargo provided one or more exits remain accessible on each side of the airplane.

The cargo conversion Model 1900D, as proposed by RAS, satisfies these criteria, and the intent of all applicable rules in § 23.807.

As such, the FAA has carefully reviewed the information contained in the petitioner's request for exemption, and agrees with their arguments.

In consideration of the foregoing, I find that a grant of exemption is in the public interest and will not adversely affect safety. Therefore, pursuant to the authority contained in Sections 313(a) and 601(c) of the Federal Aviation Act of 1958, as amended, delegated to me by the Administrator (14 CFR part 11, § 11.61), RAS is granted an exemption from § 23.807(d)(1)(ii) of the Federal Aviation Regulations to the extent necessary to allow supplemental type certification of the Raytheon Aircraft Company Model 1900D cargo conversion under STC project ST3408WI-A without an exact showing of compliance with the requirements of § 23.807(d)(1)(ii). For the 1900D models affected by this exemption, the following conditions and limitations apply:

1. This exemption is limited to those Model 1900Ds with supplemental type certificate ST3408WI-A, which allows for the cargo conversion discussed in this document.

2. During cargo operations, the airplane is limited to a maximum of one pilot, one copilot, and one observer. No other occupants are permitted during cargo operations.

3. The Airplane Flight Manual (AFM) must state that the main entry passenger door and an emergency exit on the side opposite this main door must be accessible to the occupants. The AFM must provide specific instructions on cargo loading to ensure the minimum exit requirements are met. If applicable, the AFM must also provide instructions to convert the airplane interior from all-cargo to all-passenger operations.

Issued in Kansas City, Missouri on March 5, 2003

Dorenda D. Baker
Acting Manager
Small Airplane Directorate
Aircraft Certification Service